

Notice of Allowability

Application No.

10/522,226

Applicant(s)

ITSUJI ET AL.

Examiner

Jerry Martin Blevins

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed January 31, 2006.
2. ☒ The allowed claim(s) is/are 1-19.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

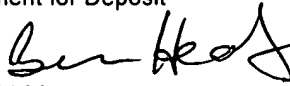
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


BRIAN HEALY
PRIMARY EXAMINER
ART UNIT 2883

DETAILED ACTION

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jason Okun on April 13, 2006.

The application has been amended as follows:

In claim 19, line 1, after the phrase "according to", delete "claim 19" and insert --claim 18--.

Response to Arguments

Applicant's arguments, see pages 8 and 9, filed January 31, 2006, with respect to claims 1-17 have been fully considered and are persuasive. The rejection of claims 1-17 has been withdrawn.

Allowable Subject Matter

Claims 1-19 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claim 1, the prior art, as best exemplified by US Pre Grant Publication to Cotteverte et al., number 2002/0048422, teaches an optical element (Figures 14-19) for reflecting or transmitting an incident light (waveguide 110), the optical element comprising a periodic structure (photonic crystal 100 with periodic columns 108) in which refractive index is distributed periodically (paragraph 13, page 2) and a deforming portion (Figure 15 shows deformation $D+\Delta d$ in the periodicity of columns 108) which deforms by external action (Figure 16, voltage 122 or Figure 17, actuator 134), wherein the deforming portion is integrally arranged with the periodic structure along the periodic direction of the periodic structure (Figure 15), and is so constructed as to change the periodicity of the periodic structure by deforming in the periodic direction of the periodic structure (pages 4 and 5, paragraphs 59-67). However, Cotteverte, either alone or in combination with the prior art, fails to disclose or render obvious that the periodic structure comprises a plurality of rods and a support film for supporting the plurality of rods.

Claims 2-16 are allowed based on their dependence from allowed base claim 1.

Regarding claim 17, Cotteverte teaches a control method for an optical element having a periodic structure in which the refractive index is distributed periodically (paragraph 13, page 2), the method comprising the steps of arranging a deforming portion (Figure 15 shows deformation $D+\Delta d$ in the periodicity of columns 108) which deforms by external action (Figure 16, voltage 122 or Figure 17, actuator 134) integrally with the periodic structure (photonic crystal 100 with periodic columns 108) along the periodic direction of the periodic structure (Figure 15), and changing the periodicity of

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the periodic structure by causing deformation in the periodic direction of the periodic structure (pages 4 and 5, paragraphs 61-64). However, Cotteverte, either alone or in combination with the prior art, fails to disclose or render obvious that the periodic structure comprises a plurality of rods and a support film for supporting the plurality of rods.

Regarding claim 18, Cotteverte teaches a periodically structured material comprising a periodic structure portion (Figures 14-19) and a substrate for deforming the periodic structure (shown in Figure 15).). However, Cotteverte, either alone or in combination with the prior art, fails to disclose or render obvious that the periodic structure comprises a plurality of rods and a support film for supporting the plurality of rods.

Claim 19 is allowed based on its dependence from allowed base claim 18.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

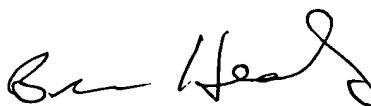
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Martin Blevins whose telephone number is 571-272-8581. The examiner can normally be reached on Monday through Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMB


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ART UNIT ~~2883~~ 2883